SUBJECT TEACHING GUIDE

M2148 - Bridges

Master's Degree in civil Engineering, Canal and Port Engineering

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Master's Degree in civil Engineering, Canal and Port Engineering			Type and Year	Optional. Year 1
Faculty	School of civil Engineering				
Discipline	CROSS CURRICULAR EDUCATION				
Course unit title and code	M2148 - Bridges				
Number of ECTS credits allocated	3	Term		Semester based (2)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ESTRUCTURAL Y MECANICA
Name of lecturer	CARLOS ALONSO COBO
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Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO (2070)
Other lecturers	JAVIER TORRES RUIZ GUILLERMO CAPELLAN MIGUEL OSCAR RAMON RAMOS GUTIERREZ ALVARO GAUTE ALONSO

3.1 LEARNING OUTCOMES
- Knowledge of the general and specific peculiarities of the project, calculation and control of bridges
- Knowledge of the general and specific peculiarities of the project, calculation and control of bridges
- Knowledge and management of current regulations concerning the project, execution and control of bridge

4. OBJECTIVES

The objectives of the subject aim to provide the student with basic training in relation to the design, construction and maintenance of bridges. Thus, the student will acquire knowledge about bridge typologies, bridge components, construction systems, inspection, pathology and load tests to be carried out

6. COURSE ORGANIZATION

	CONTENTS
1	Introduction to Bridges Definitions The Bridge and landscape□Genesis of the bridge□The bridge as a symbol in history
2	Basic type of bridges and pre-dimensioning Beam board bridges Sn snugly board bridges Bridges drawer Arch bridges Bridges supported by suspenders
3	Particular elements of bridges Batteries Stirrups Support devices Expansion joints Waterproofing and drainage
4	Construction systems and load testing Cimbrado Vain to no ava. Cantilevered advance Push, etc. Load tests

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Students must carry out the practical and laboratory exercises proposed in Class, all of which will be carried out during the Course. The evaluation will be continuous throughout the course. Minimum note 4□At the end of the course a written examination wi	Written exam	Yes	Yes	50,00
Part-time enrolled students must take both parts of the exam, both theory and practical exercise, minimum grade in both 4	Work	No	Yes	50,00
TOTAL				100,00

Observations

Students must carry out the practical and laboratory exercises proposed in Class, all of which will be carried out during the Course. The evaluation will be continuous throughout the course. Minimum note 4□At the end of the course a written examination will be done with theoretical questions and a practical exercise (*)□The written examination consists of two parts: a theoretical one representing 50% of the final grade, where a minimum grade of 4 should be obtained, and a practical exercise representing the other 50%, minimum grade 4.□(*) The written exercise will only be performed by part-time enrolled students. For the rest of the students the evaluation of the practical exercises will be continuous throughout the course. The exam with theoretical questions will be common for all students, both full-time and part-time.

Observations for part-time students

Part-time enrolled students must take both parts of the exam, both theory and practical exercise, minimum grade in both 4

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Instrucción de Acciones de puentes de Carretera IAP11
Instrucción de Acciones de puentes de ferrocarril IAPF 07
Norma Sísmica de puentes NCSP07
Colección de libros sobre PUENTES de J. Manterola
Estribos de puentes J. Arenas y Ángel Aparicio
Pilas de puente de tramo recto J. Arenas y Ángel Aparicio